

## **ABSTRACT**

2 An apparatus, data structures, and method are provided for prioritizing data  
3 transmissions within a network. As applied to a switching station in a network, the method  
4 prioritizes transmissions from the network to determine which packets should be transmitted  
5 from the switching station first when multiple packets are routed to the same outgoing port  
6 of the switching station. A packet prioritization station is provided, preferably as an add-on  
7 to the switching station. The packet prioritization station has a cache in which the  
8 destination address of each incoming packet is associated with every origin from which it has  
9 received a transmission within a certain time period. The packet prioritization station  
10 operates to give priority to transmissions to those destinations that have a higher number of  
11 associated origins. Thus, packets that are probably en route to time-critical users or groups  
12 of users will be sent before those that are less time-sensitive.

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